Maryland Historical Trust

Maryland Inventory of Historic Properties number: CH-387

Name: 3015/MD 6 over Nanjemoy Crk.

The bridge referenced herein was inventoried by the Maryland State Highway Administration as part of the Historic Bridge Inventory, and SHA provided the Trust with eligibility determinations in February 2001. The Trust accepted the Historic Bridge Inventory on April 3, 2001. The bridge received the following determination of eligibility.

MARYLAND HISTORICAL TRUST

Eligibility Recommended ___X____ Eligibility Not Recommended _____

Criteria: ____A ____B ____C ____D Considerations: ___A ___B ___C ___D ___E ___F ___G __None

Comments: _____

_____

_____

Reviewer, OPS: _Anne E. Bruder_____ Date: __3 April 2001____

Reviewer, NR Program: __Peter E. Kurtze_____ Date: __3 April 2001____

MARYLAND INVENTORY OF HISTORIC BRIDGES
HISTORIC BRIDGE INVENTORY
MARYLAND STATE HIGHWAY ADMINISTRATION/
MARYLAND HISTORICAL TRUST

MHT No. CH-387

SHA Bridge No. 8015 Bridge name MD 6 over Nanjemoy Creek

LOCATION:
Street/Road name and number [facility carried] MD 6

City/town Grayton Vicinity X

County Charles

This bridge projects over: Road ___ Railway___ Water X__ Land ____

Ownership: State X County __ Municipal _____ Other _____
HISTORIC STATUS:
Is bridge located within a designated historic district? Yes _____ No X
National Register-listed district ____ National Register-determined-eligible district __
Locally-designated district _____ Other _____

Name of district _____

BRIDGE TYPE:
Timber Bridge _____:
Beam Bridge _____ Truss -Covered ___ Trestle ____ Timber-And-Concrete ___

Stone Arch Bridge __

Metal Truss Bridge _

Movable Bridge _____:
Swing _____ Bascule Single Leaf __ Bascule Multiple Leaf _____
Vertical Lift _ Retractile _____ Pontoon _____

Metal Girder _____:
Rolled Girder _____ Rolled Girder Concrete Encased _____
Plate Girder _____ Plate Girder Concrete Encased _____

Metal Suspension ___

Metal Arch __

Metal Cantilever ____

Concrete X:
Concrete Arch_____ Concrete Slab X Concrete Beam __ Rigid Frame _____
Other _____ Type Name _____

CH-387

DESCRIPTION:

Setting: Urban _____ **Small town** _____ **Rural** X

Describe Setting:

Bridge No. 8015 carries MD 6 over Nanjemoy Creek in Charles County. MD 6 runs north-south, while Nanjemoy Creek flows northeast to southwest. To the north and east of the bridge are two late nineteenth century farmhouses. The closest dwelling is to the east. It is a two-and-a-half story, massed-plan, side gable, three-bay house with wooden siding. There are forested lands to the west and wetlands to the south.

Describe Superstructure and Substructure:

Bridge No. 8015 over Nanjemoy Creek in Charles County is a three span concrete slab bridge built in 1922. There are two span lengths of 22' and one span of 23' for a total of 67'. The out-to-out width of the deck is 26' and the wingwalls are 10' in length. The superstructure, consisting of the slab, the roadway and the parapet, is in good condition. The concrete deck is solid but an area of spalling has occurred at the southwest end near the abutment without exposing the rebar. Span No. 1 is misaligned 1/2" at the pier. The bituminous road surface has minor cracking. The concrete parapets are closed and paneled with a flat coping on both sides of the bridge. They are not load bearing and are misaligned 1/8" at the pier. W-beam guardrails were added to the roadway at an unknown date and connect to the bridge at the ends of the parapet walls. The bridge is posted at 60,000 lbs for single units, and 80,000 for combination units.

The substructure consists of abutments, wingwalls and piers. The concrete abutments are in good condition, however the southwest wingwall has a full height crack at the junction to the abutment. The northeast and southwest wingwalls are flared at an approximate 20 degree angle to the roadway center line. The southwest and the northeast wingwalls are straight. The creeks runs directly along the abutments and the wingwalls but the members show no signs of scour. The concrete solid shaft piers taper towards the deck and are in good condition.

Discuss Major Alterations:

The only alteration has been the addition of w-beam guardrails to the roadway at an unknown date. These connect to the bridge at the ends of the parapet walls.

HISTORY:

WHEN was the bridge built? 1922

WHY was the bridge built?

At the time of the bridge's construction, Maryland route 6 was an established road and was one of a few that provided access to the southwest portion of Charles county along the Potomac River. This bridge replaced an older bridge of unknown construction at the same location and provided a more permanent means of crossing Nanjemoy Creek.

WHO was the designer?

State Roads Commission

WHO was the builder?

State Roads Commission

WHY was the bridge altered?
The bridge was altered to meet increased safety guidelines and to extend the useful life of the bridge.

WAS the bridge built as part of organized bridge-building campaign?
Yes, post World War I improvements to secondary roads.

SURVEYOR/HISTORIAN ANALYSIS:

This bridge may have National Register significance for its association with:
A - Events ____ B- Person _____
C- Engineering/architectural character ____

Was the bridge constructed in response to significant events in Maryland or local history?
Reinforced concrete slab bridges are a twentieth century structure type, easily adapted to the need for expedient engineering solutions. Reinforced concrete technology developed rapidly in the early twentieth century with early recognition of the potential for standardized design. The first U.S. attempt to standardize concrete design specifications came in 1903-1904 with the formation of the Joint Committee on Concrete and Reinforced Concrete of the American Society of Civil Engineers.

Maryland's roads and bridge improvement programs mirrored economic cycles. The first road improvement of the State Roads Commission was a 7 year program, starting with the Commissions establishment in 1908 and ending in 1915. Due to World War I, the period from 1916-1920 was one of relative inactivity; only roads of first priority were built. Truck traffic resulting from war related factories and military installations generated new, heavy traffic unanticipated by the builders of the early road system. From 1920-1929, numerous highway improvements occurred in response to the increase in Maryland motor vehicles from 103,000 in 1920 to 320,000 in 1929, with emphasis on the secondary system of feeder roads which moved traffic from the primary roads built before World War I. After World War I, Maryland's bridge system also was appraised as too narrow and structurally inadequate for the increasing traffic , with plans for an expanded bridge program to be handled by the Bridge Division, set up in 1920. In 1920 under Chapter 508 of the Acts of 1920 the State issued a bond of $3,000,000.00 for road construction; the primary purpose of these monies was to meet the state obligations involving the construction of rural post roads. The secondary purpose of these monies was to fund (with an equal sum from the counties) the building of lateral roads. the number of hard surfaced roads on the state system grew from 2000 in 1920 to 3200 in 1930. By 1930, Maryland's primary system had been inadequate to the huge freight trucks and volume of passenger cars in use, with major improvements occurring in the late 1930s. Most improvements to local roads waited until the years after World War I.

With a diverse topographical domain encompassing numerous small and large crossings, Maryland engineers quickly recognized the need for expedient design and construction.

In the early years, there was a need to replace the numerous single lane timber bridges. Walter Wilson Crosby, Chief Engineer stated in 1906, "The general plan has been to replace these [wood bridges] with pipe culverts or concrete bridges and thus forever do way with the further expense of the maintenance of expensive and dangerous wooden structures". Within a few years, readily constructed standardized bridges of concrete were being built throughout the state.

The creation of standard plans and a description of their use was first announced in the 1912-15 Reports of the State Roads Commission whereby bridges spanning up to 36 feet were to use standardized designs.

Published on a single sheet, the 1912 Standard Plans included those structures that were amenable to such an approach: slab spans, (deck) girder spans, box culverts, box bridges, abutments, and piers (State Roads Commission 1912). Slab spans, with lengths of 6 to 16 feet in two foot increments, featured a solid parapet that was integrated into the slab, with a roadway of 22 feet.

In the Report for the years 1916-1919, a revision of the standard plans was noted:

> During the four years covered by this report, it has been found necessary to revise our standard plans for culverts and bridges, to take care of the increased tonnage which they have been forced to carry. Army cantonments...increased their operations several hundred per cent, and the brunt of the enormous truck traffic resulting therefrom, was borne by the State Roads of Maryland. In addition to these war activities, freight motor lines from Baltimore to Washington, Philadelphia, New York, and various points throughout Maryland, and the weight of many of these trucks when loaded, was in excess of the loads for which our early bridges were designed (State Roads Commission 1920:56).

Published on separate sheets, the new standard plans (State Roads Commission 1919) for slab bridges reveal that the major changes was an increase in roadway width from 22 feet to 24 feet and a redesign of the reinforcement. The slab spans continued to feature solid parapets integrated into the span. The range of span lengths remained 6 to 16 feet, but the next year (1920) witnessed the issue of a supplemental plan for a 20 foot long slab span (State Roads Commission 1920).

When the bridge was built and/or given a major alteration, did it have a significant impact on the growth and development of the area?
Although built following the first World War post construction phase this bridge did not greatly effect the area surrounding it. The structure did not increase settlement or industry.

Is the bridge located in an area which may be eligible for historic designation and would the bridge add to or detract from historic/visual character of the potential district?
No, this bridge is not located in an area which is eligible for historic designation.

Is the bridge a significant example of its type?
This structure is not a significant example of its type.

Does the bridge retain integrity of important elements described in the Context Addendum?
The bridge has its character defining elements in place, including the parapets, wingwalls and abutments.

Is bridge a significant example of work of a manufacturer, designer and/or engineer?
This bridge is not a significant example of work of a manufacturer, designer and/or engineer.

Should the bridge be given further study before an evaluation of significance is made?
No further evaluation is necessary to determine National Register significance.

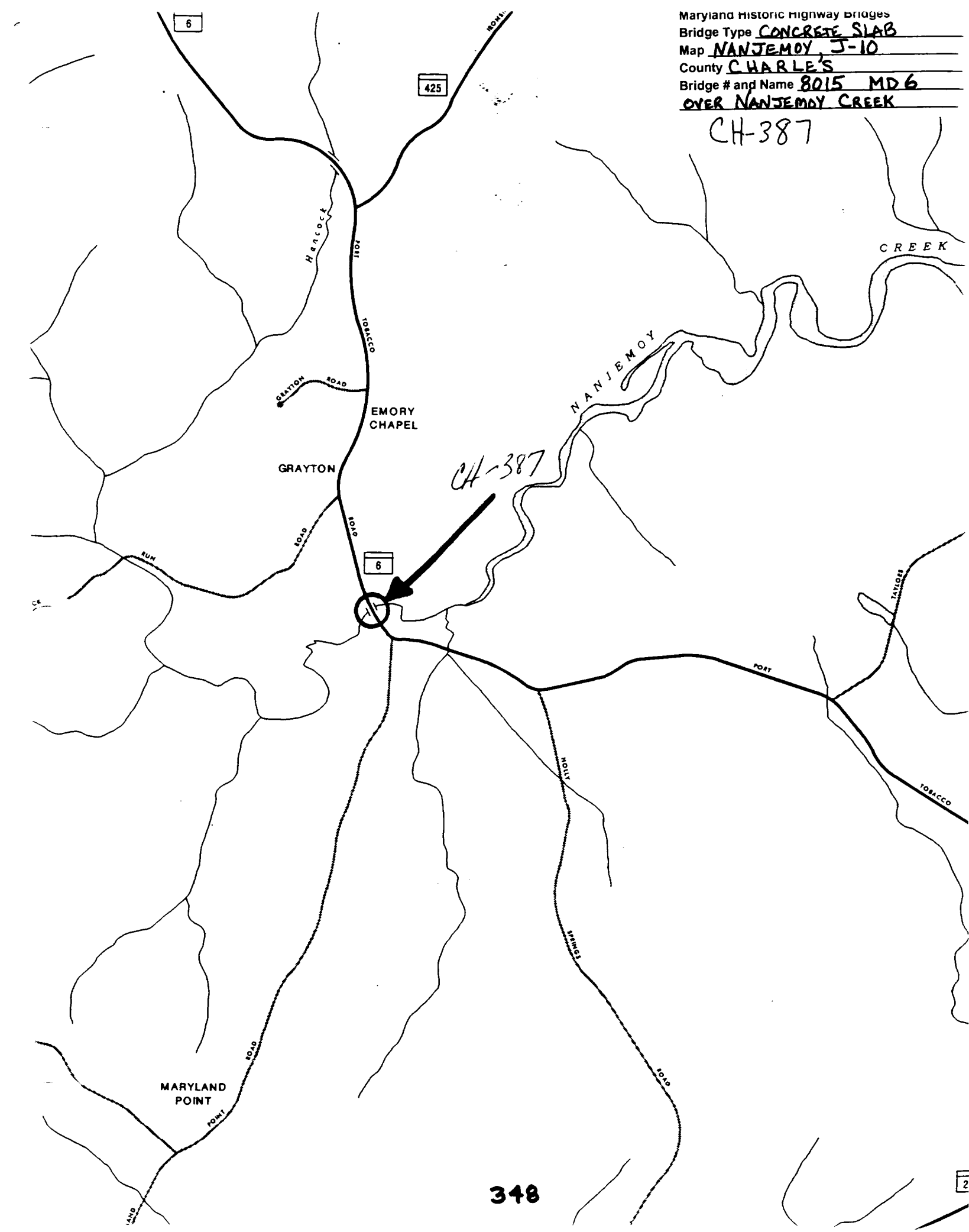
CH-387

BIBLIOGRAPHY:

County inspection/bridge files _____ **SHA inspection/bridge files** __X__
Other (list):

SURVEYOR/SURVEY INFORMATION:

Date bridge recorded 8/11/95
Name of surveyor Timothy J. Tamburrino
Organization/Address P.A.C. Spero & Company,40 W. Chesapeake Avenue,Suite 412,Baltimore, Maryland 21204
Phone number 410-296-1635 **FAX number** 410-296-1670


Maryland Historic Highway Bridges
Bridge Type CONCRETE SLAB
Map NANJEMOY, J-10
County CHARLES
Bridge # and Name 8015 MD 6
OVER NANJEMOY CREEK
CH-387
6
425
HANCOCK
TOBACCO
ROAD
GRAYTON ROAD
EMORY CHAPEL
GRAYTON
NANJEMOY
CREEK
CH-387
ROAD
RUN
6
TAYLORS
PORT
HOLLY
SPRINGS
ROAD
TOBACCO
MARYLAND POINT
POINT
ROAD
LAND
2

CH387

1 OF 5

BRIDGE # 8015
CHARLES COUNTY

D. BHAUMIK
2-2-95

MARYLAND ~~SHPO~~ SHA

MD 6 OVER NANJEMOY CREEK
LOOKING EAST (UPSTREAM FACE)

CH387

BRIDGE # 8015
CHARLES COUNTY

D. BLAUMIK
2-2-95

MARYLAND SHPO SHA

MD 6 OVER NANJEMOY CREEK
LOOKING SOUTH ON MD 6

3 OF 5

CH 387
BRIDGE # 8015
CHARLES COUNTY

D. BHAUMIK
2-2-95

MARYLAND SHPO SHA
MD 6 OVER NANJEMOY CREEK
LOOKING NORTH ON MD 6

4 OF 5

CH387

BRIDGE # 8015
CHARLES COUNTY

D. BHAUMIK
2-2-95

MARYLAND SHPO SHA
MD6 OVER NANJEMOY CREEK
LOOKING WEST (DOWNSTREAM SIDE)

CH 387
BRIDGE # 8015
CHARLES COUNTY

5 OF 5

D. BHAUMIK
2-2-95

~~MARYLAND SHPO~~ SHA

MD 6 OVER NANJEMOY CREEK

SEVERE CRACKING AT SOUTH-EAST WING WALL & SEVERE SPALLING AT SLAB SOFFIT (EXPOSED REINFORCING RODS).